



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,137	04/29/2005	Hidesato Mano	KES-US040474	2300
22919	7590	12/17/2008	EXAMINER	
GLOBAL IP COUNSELORS, LLP 1233 20TH STREET, NW, SUITE 700 WASHINGTON, DC 20036-2680			HAUTH, GALEN H	
ART UNIT	PAPER NUMBER			
	1791			
MAIL DATE	DELIVERY MODE			
12/17/2008	PAPER			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/533,137	<b>Applicant(s)</b> MANO, HIDESATO
	<b>Examiner</b> GALEN HAUTH	<b>Art Unit</b> 1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 31 October 2008.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. Acknowledgment is made to applicant's addition of claim 10. No new matter has been added.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al. (US 6245182 B1).

a. With regards to claim 1, Nakamura et al. teaches of a thermosetting and active energy ray curable resin composition comprising a polymer having a (meth)acryl equivalent weight of 100 to 300g/eq , a hydroxyl value of 20 to 5000 and a weight average molecular weight of 50,00 to 50,000 and a polyfunctional isocyanate (heat curing agent). Nakamura more specifically teaches that the (meth)acryl polymer is glycidyl (meth)acrylate which is known by one of the ordinary skill in the art to comprise epoxy groups. (col 3: 34-52).

b. With regards to claim 2, the teachings of claim 1 apply. In addition, Nakamura et al. teaches that the reaction product obtained by poly-addition of glycidyl methacrylate based polymer and alpha, beta unsaturated monocarboxylic acid (the polymer is the reaction product of the addition of a

monocarboxylic acid having an unsaturated double bond to a polymer having an epoxy group) (col 3 ln 49-52).I

c. With regards to claim 3, the teachings of claims 1 and 2 apply. In addition, Nakamura et al. teaches that the glycidyl methacrylate based polymer may be a homopolymer of glycidyl methacrylate or a copolymer of glycidyl methacrylate (col 3 ln 53-56).

d. With regards to claims 6 and 7, Nakamura et al. teaches of a transfer material comprising a protective layer on a releasable sheet (col 3 ln 30-46, col 4 ln 14-27).

e. With regards to claim 8, Nakamura et al. teaches a method for producing a molded article comprising the steps of (col 3 ln 62-64, col 4 ln 14-23).

i. Adhering transfer material onto a substrate of a molded article (col 3 ln 64-67);

ii. Releasing the substrate sheet (removing the releasable base sheet) (col 4 ln 1)

iii. Irradiating with an active energy ray (irradiating the surface of the molded article with an active energy ray) (col 4 ln 2).

f. With regards to claim 9, Nakamura et al. teaches a method of producing a molded article comprising the steps of (col 4 ln 3-6)

iv. Placing a transfer material in a mold (applying a transfer material to the inside of a mold) (col 4 ln 7-8).

- v. Injecting a resin into a cavity for filling, molding, and simultaneously adhering the transfer material to the surface of the molded resin (filling a cavity of the mold with a resin by injection to thereby form a molded article and adhering the transfer material to a surface of the molded article) (col 4 ln 8-11);
- vi. Releasing the substrate sheet (removing the releasable base sheet) (col 4 ln 12)
- vii. Irradiating with an active energy ray (irradiating the surface of the molded article with an active energy ray) (col 4 ln 13).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 4, 5, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US 6245182) as applied to claims 1-3 and 6-9 above and in further view of Kawakubo et al. (US 4837274).

a. Nakamura et al. teaches a thermosetting and active curable energy ray composition as taught in claim 1. Nakamura et al. does not teach about a heat-curing agent selected from the group required in claim 4; and of a photo polymerization initiator (claim 5).

b. Kawakubo et al. teaches of a curable composition wherein a silane coupling agent is used as a curing catalyst in a thermosetting and active energy ray curable (meth)acryl based polymer or copolymer (claim 4: wherein the heat curing agent is one or more compounds selected from the group consisting of silane coupling agents, and claim 10 wherein the heat curing agent has no isocyanate group) (col 2 ln 53-68; col 10 ln 50-51). Regarding claim 5, Kawakubo et al. teaches of additives like plasticizers which can be admixed at the time when preparing the organic polymer (photo polymerization initiator) (col 9 ln 16-26, 36-51).

c. At the time of invention, it would have been obvious to one of ordinary skill in the art to use the teachings of heat curing agents and polymerization additives as taught by Kawakubo in the teachings of Nakamura et al. in order to better control tensile properties i.e. elasticity and elongation of the composition (Kawakubo: col 2 ln 3-4, 16-17) used to make articles with superior wear and

abrasion resistance, chemical resistance, and increased work life thus avoiding cracks when making curved surfaces.

***Response to Arguments***

7. Applicant's arguments filed 10/31/2008 have been fully considered but they are not persuasive.

a. With regards to the rejection of claims 1-3 and 6-9 under 102(b) applicant argues that the cited reference does not teach all the limitations of the claim, specifically that the composition is a thermosetting composition and that the composition lacks a heat-curing agent. These arguments are not found persuasive. The cited reference is silent as to using the specific word "thermosetting"; however, the cited composition teaches a reaction of actinic radiation that crosslinks and cures the polymer, a polymer which is similar in composition to the applicant's composition. Given the similarities between the applicant's composition and the references composition as well as the identical methods of curing the composition, the reference composition would inherently be a thermosetting polymer.

**NOTE:** Where ... the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. **Whether the rejection is based on "inherency" under 35 USC § 102, on prima facie obviousness" under 35 USC § 103, jointly or alternatively, the burden of proof is the same, and its fairness is evidenced by the PTO's inability to manufacture products or to obtain and compare prior art products."** In re Best, 562 F2d 1252, 1255, 195 USPQ 430, 433-4 (CCPA 1977).

b. With regards to the argument that the composition does not contain a heat-curable agent, the applicant states that the composition cannot contain a heat-curing agent because Nakamura teaches heating the transfer material in order to soften the material which is later irradiated. While Nakamura does heat the material to soften it, Nakamura also teaches that the polyfunctional isocyanate reacts with the polymer to form a slightly cross-linked compound. Thus when heated the polyfunctional isocyanate reacts with the polymer for keeping stickiness of the protected printed layer prior to irradiation and provides resistance to the solvent in the ink (col 8 ln 1-11). The argument that the composition of Nakamura is not a thermoset because it is softened is not persuasive, because a thermoset may be softened as long as it has not yet been cured and does not reach a curing temperature. The composition of Nakamura is heat softened prior to fully curing by irradiation.

c. With regards to the rejection of claims 4 and 5 under 103(a) applicant argues that the claims upon which 4 and 5 depend were invalid for the reasons above, and these arguments are not found persuasive for the reasons above.

#### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GALEN HAUTH whose telephone number is (571)270-5516. The examiner can normally be reached on Monday to Thursday 8:30am-5:00pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571)272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1791

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GHH/

/Christina Johnson/  
Supervisory Patent Examiner, Art Unit 1791